

AMENDMENT TO DRAWINGS

The Replacement Sheet of drawings attached as part of the Appendix includes changes to Figures 1 and 2 to address the Examiner's objection to the drawings. The first Replacement Sheet, which includes Figure 1, and the second Replacement Sheet, which includes Figures 2 and 3, replace the current drawing sheets illustrating Figures 1, 2, and 3.

In amended Figures 1 and 2, the rotary inlet (element 49) has been shown to address and overcome the Examiner's objection to the drawings

REMARKS***Summary of the Response***

Upon entry of the pending amendments, the specification and Figures 1 and 2 will have been amended, and two (2) Replacement Sheets will have been entered to replace the sheets illustrating Figures 1, 2, and 3 pending prior to this amendment. As the claims have not been amended, claims 55 – 114 remain pending.

Summary of the Official Action

In the instant Office Action, the Examiner has indicated that claims 62 – 67, 72, 90 – 95, 98, and 100 contain allowable subject matter and would be allowable if presented in independent forms that include the features of their respective base claims. Further, the Examiner has rejected claims 55 – 61, 68 – 71, 73 – 89, 96, 97, 99, and 101 – 114 over the art of record. By the present amendment and remarks, Applicant submits that the rejection have been overcome, and respectfully requests reconsideration of the outstanding Office Action and allowance of the present application.

Acknowledgment of Allowable Subject Matter

Applicant gratefully acknowledges the Examiner's indication that claims 62 – 67, 72, 90 – 95, 98, and 100 contain allowable subject matter and would be allowable if presented in independent forms that include the features of their respective base claims. Further, Applicant notes that, while none of these claims are being presented into independent and allowable form at this time, any of these claims can be presented into allowable form in a subsequent response.

Acknowledgment of Interview with Examiner

Applicant gratefully acknowledges the courtesy extended to his representative by Examiner Wilson in conducting an interview on February 17, 2009. In the interview, the

Examiner clarified his position that the primary document of LINK discloses internal and/or external heating of a press roller, and that it would have been obvious to utilize another type of heating within the cylinder, such as the catalytic heating described by TONON. In response, Applicant pointed out that the applied art fails to provide any arguable manner for combining the teachings of the applied art without preventing LINK from operating in its intended manner. The reasoning provided by Applicant's representative is more fully discussed below.

Objection to the Drawings is Moot

Applicant submits that, by the present amendment and submission of the attached replacement sheets, the objection to the drawings is moot and should be withdrawn. By the present amendment, a "black box" representation of rotary inlet 49 has been shown in dashed lines in Figures 1 and 2 to address and overcome the Examiner's objection to the drawings. Further, Applicant notes that express support for the rotary inlet can be found in at least paragraphs [0106] and [0109].

Moreover, Applicant note that, as a rotary inlet is a well known device, detailed illustration of this device is not required for the understanding of those ordinarily skilled in the art. Thus, while illustration of the rotary inlet device is not necessary for the understanding of the invention by one ordinarily skilled in the art, a black box representation of the rotary inlet has been provided in Figures 1 and 2 to comply with 37 C.F.R. 1.84

Accordingly, consideration and entry of the attached Replacement Sheets are respectfully requested, as are reconsideration and withdrawal of the drawing objection.

Traversal of Rejection Under 35 U.S.C. § 102(b)

Applicant traverses the rejection of claims 55 – 61, 68 – 71, 73 – 89, 96, 97, 99, and 101 – 114 under 35 U.S.C. § 103(a) as being unpatentable over LINK et al. (U.S. Patent No.

5,076,891) [hereinafter "LINK"] in view of TONON (U.S. Patent No. 5,326,252). The Examiner asserts that LINK shows a heatable roller used in paper production, which includes a non-rotatable core surrounded by a rotatable casing, and a duct-filled annular region between the core and casing. The Examiner also asserts that, as LINK discloses it is possible to heat the interior of the roll with separate heating devices, it would have been obvious to modify LINK to apply a catalyst to the interior surface, as taught by TONON. Applicant traverses the Examiner's assertions.

Applicant's independent claim 55 recites, *inter alia*, generating heat at least in part inside the roller by *catalytically combusting* a fuel with air or oxygen at least in some regions inside the roller, and Applicant's independent claim 83 recites, *inter alia*, a heating unit comprising *a catalyst arranged on an inside of the roller* to combust a fuel with air or oxygen. Applicant submits no proper combination of LINK in view of TONON renders unpatentable the combination of features recited in the above-noted claims.

As has been discussed at length throughout prosecution of this application, the present invention provides a catalyst on an inside of the roller. When a fuel with air or oxygen is fed to the catalyst inside the roller, an exothermic reaction occurs and heat is generated in the catalyst. Thus, the heat is generated through catalytic combustion of the fuel at least in part inside the roller.

While Applicant acknowledges that LINK discloses a pair of heated sag compensation rollers arranged to press a continuous material. As illustrated in Figure 1, the upper sag compensation roller is formed by a roller shell 5 arranged to rotate around support 4 and hydrostatic bracing element 6. As shown, hydrostatic bracing elements 6 bear against the inside surface of rotating roller shell 5. Moreover, LINK discloses that, by heating a hydraulic pressure

medium with a heating device 12 before the heated hydraulic pressure medium is supplied to the hydrostatic pockets in hydrostatic bracing elements 6, the sag compensation roller can be heated. LINK also describes a heating device 13 arranged outside of the roller to heat the exterior surface of roller shell 5.

Applicant notes that it is the heating within the sag compensation roller that the Examiner suggests would have been obvious to modify in view of the catalytic heating of TONON. However, in contrast to LINK's disclosure of heating a fluid or medium that will heat the internal surface of roller shell 5 on contact, when the fluid or medium is supplied to the hydraulic pockets of hydraulic bracing elements 6, TONON discloses a catalytic burner formed by concentric cylinders 11 and 12. A catalytic material is coated on the inner surface of cylinder 11, so that when a fuel gas passes through cylinder 11, the heat generated in cylinder 11 heats cylinder 12, which thereby heats a medium outside of cylinder 12.

Applicant notes that the Office Action does not specifically identify the manner by which it would have been obvious to modify LINK to include the catalytic surface of TONON. In other words, the Examiner has not alleged how one ordinarily skilled in the art would have provided a catalytic surface within the sag compensation of LINK in order to render the pending invention obvious. However, in the above-noted interview, the Examiner asserted it would have been obvious to coat the inside surface of roller shell 5 with a catalyst to generate heat within the sag compensation roller.

Applicant notes that even assuming, *arguendo*, that one ordinarily skilled in the art would have found it obvious to coat the inside of the roller shell of LINK with a catalytic material, which Applicant submits one would not, it is not apparent that LINK would continue to operate in its intended manner. In particular, Applicant notes that it would appear that because hydraulic

bracing elements 6 are arranged to bear against the inside surface of the roller shell, as the roller shell rotates, the coating would be scraped off or at least disturbed by the bracing elements.

Because the coating would not appear to remain uniform over the inside surface of the roller shell as it rotates past the bracing elements, Applicant submits it is not apparent that the internal heating in the sag compensation roller would operate in the manner intended by LINK.

Applicant further submits that, even if the alleged catalytic coated roller surface of the roller shell of LINK in view of TONON could rotate undisturbed by the bracing elements, Applicant notes it is not apparent that the catalytic burning on the surface of the roller shell would not adversely affect the bracing elements. That is, it is not apparent, and the Examiner has not addressed, whether the bracing elements of LINK would operate in their intended manners without any adverse destruction of the elements due to direct contact with a catalytically burning surface.

Still further, as the bracing elements of LINK require a hydraulic medium or fluid so the roller shell, Applicant submits it is not apparent how or even if the Examiner's asserted combination of documents would operate in the intended manner. That is, Applicants submit that, even assuming, *arguendo*, that one were to find it obvious to provide a catalytic coating on the inside surface of the roller shell, which Applicant submits one would not, it is not apparent what effect the hydraulic fluid would have on the catalytic burning surface, i.e., would the fluid prevent the intended catalytic burning from occurring or would the fluid also ignite so as to exacerbate the burning within the cylinder to temperatures beyond the intended heating. As the applied art fails to suggest how the Examiner's alleged combination of LINK in view of TONON would operate, if at all, Applicant submits the art of record fails to provide the requisite reasoning for proper combination under 35 U.S.C. § 103(a).

Applicant also submits that the Examiner has not shown any manner by which it would have been obvious to supply fuel gas to the cylinder in order to ensure that the intended heating occurs within the sag compensated roller. In particular, Applicant notes that LINK fails to suggest any structure for supplying gas to the roller, and TONON does not disclose suitable structure for modifying LINK so as to supply gas to the interior of the roller shell.

Applicant also notes that TONON is structured to achieve uniform heating around the periphery of cylinder 12. To achieve this uniformity, fins f are arranged between cylinder 11 and cylinder 12 to maintain uniform spacing. While this uniform heating around the catalytic burner of TONON is the intended result, Applicants note that the heated portion of LINK is targeted from the nip in which the bracing elements press against continuous material 1. As discussed above, this targeted heating is achieved by LINK's heating the pressure fluid medium by heating device 12 before the fluid enters the hydrostatic pockets of the bracing elements to contact the inner surface of the roller shell. Thus, Applicant submits that the intended heating area for the two applied documents is wholly distinct, and that to heat the entirety of the interior of the sag compensation roller through catalytic burning would result in huge losses in energy, money, and cause extremely high temperatures in the vicinity of the rollers which may be dangerous to personnel. Accordingly, for at least this additional reasoning, Applicant submits it would not have been obvious for one ordinarily skilled in the art to modify LINK in the manner asserted by the Examiner, i.e., in view of TONON.

In view of the foregoing, Applicant submits one ordinarily skilled in the art would have no reasonable expectation of success if LINK and TONON were combined in the manner asserted by the Examiner. Further, Applicant submits that the applied art fails to provide any articulated reasoning for modifying LINK to include a catalytic coated roller shell.

Thus, Applicant submits that no proper combination of LINK in view of TONON can render unpatentable under 35 U.S.C. § 103(a) the combination of features recited in at least independent claims 55 and 83.

Further, Applicant submits that claims 56 – 61, 68 – 71, 73 – 82, 84 – 89, 96, 97, 99, and 101 – 114 are allowable over any proper combination of LINK in view of TONON at least for the reason that these claims depend from allowable base claims and because these claims recite additional features that further defines the invention. In particular, Applicant submits that PROMONET fails to show each and every recited feature recited in claims 56 – 61, 68 – 71, 73 – 82, 84 – 89, 96, 97, 99, and 101 – 114.

Accordingly, Applicant requests that the Examiner reconsider and withdraw the rejection of claims 55 – 61, 68 – 71, 73 – 89, 96, 97, 99, and 101 – 114 under 35 U.S.C. § 103(a) and indicate that these claims are allowable.

Application is Allowable

Thus, Applicant respectfully submits that each and every pending claim of the present invention meets the requirements for patentability under 35 U.S.C. §§ 102 and 103, and respectfully requests the Examiner to indicate allowance of each and every pending claim of the present invention.

Authorization to Charge Deposit Account

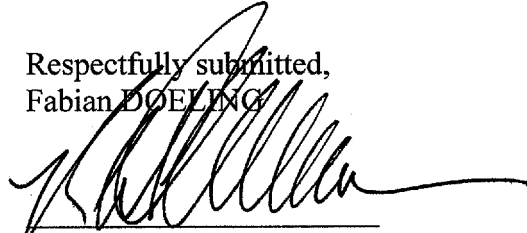
The undersigned authorizes the charging of any necessary fees, including any extensions of time fees required to place the application in condition for allowance by Examiner's Amendment, to Deposit Account No. 19 - 0089 in order to maintain pendency of this application.

CONCLUSION

In view of the foregoing, it is submitted that none of the references of record, either taken alone or in any proper combination thereof, anticipate or render obvious the Applicant's invention, as recited in each of claims 55 – 114. The applied references of record have been discussed and distinguished, while significant claimed features of the present invention have been pointed out.

Accordingly, reconsideration of the outstanding Office Action and allowance of the present application and all the claims therein are respectfully requested and now believed to be appropriate.

Respectfully submitted,
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